Section A: General Information for Sewer Discharge Permit

1. Business Name (*as it will appear on permit*): Big Ox Energy Siouxland

2. Operator/Owner: Big Ox Energy, Inc.

3. Billing Address: 6601 County Road R
   Denmark, WI 54208

4. Billing Contact and Phone Number: Bryan Lemmens
   920-676-2765

5. Facility Address (*if different from billing*): 1616 D Avenue
   Dakota City, NE 68731

6. Facility Phone Number: TBD

7. Representative to Contact Concerning Information Provided:
   Name: Matt Cole
   Title: VP of Engineering
   Phone Number: 920-615-2226
   E-mail: mcole@bigoxenergy.com

8. Authorized Representative:
   Name: Matt Cole
   Title: VP of Engineering
   Phone Number: 920-615-2226
   E-mail: mcole@bigoxenergy.com

9. Name of Representative to receive permit (*if different from Authorized Representative*):
   Name: _____
   Title: _____
   Phone Number: _____
   E-mail: _____

10. Does the facility currently have environmental permits from other agencies? [Y] / N
If yes, please attach copies of all current permits.

-Will be attached when facility is in operation

11. Facility Tax ID Code (*Billing information)*: **37-1760263**

Section B: Operational Information

PLEASE ANSWER ALL QUESTIONS COMPLETELY

1. Existing Wastewater Discharge Permit Number (*if applicable*): **N/A**

2. Type of Notification:
   - Existing Discharger
   - Discharge Modification
   - **Proposed Discharge as of 4/1/2016 *(date)***

Please indicate what discharge operations will be in place at the time of discharge.
   - **Discharge to sewer**
   - Discharge to holding or equalization tank
   - Discharge to a septic tank
     Will contents be hauled to the POTW? **Y / N**

3. Does the facility discharge more than 25,000 gallons of process wastewater per day? [Y] / N

4. Type of operation currently present at your facility (*check all that apply*):
   - Electroplating
   - Foundry
   - Painting or Finishing
   - Metal Finishing
   - Machine Shop/Assembly
   - Chemical Manufacturer
   - Electronics Manufacturer
   - Equipment Cleaning/ Washing Facility
   - Fertilizer Manufacturer
   - Food or Beverage Manufacturer
   - Food or Beverage Packing Facility
   - Laboratory
   - Leachate
   - Medical Care Facility
   - Military
   - Office or Retail Facility
   - Pet Food Manufacturer
   - Pharmaceutical Manufacturer
   - Photographic Developing
   - Powder Coating Paint Facility
   - Residential
   - Printing
   - Rendering Facility
   - Slaughter Facility
   - **Other Chemical Manufacturer**

For Pretreatment Standards, please reference the Code of Federal Regulations:
40 CFR Parts 400 to 699.

Please provide a brief description of the operation(s) checked above:

The Big Ox Energy Siouxland facility processes wastewater and organic wastes from surrounding industries. Wastewater is delivered to the facilities through three forcemains and treated through a Dissolved Air Flotation (DAF) process and discharge through a forcemain to the municipal sanitary sewer. Solids removed from the DAF process and high strength hauled-in wastes are processed through an anaerobic digestion system. The biogas produced from the digestion process is scrubbed, compressed and injected into the natural gas pipeline. Resultant solids are dewatered and hauled-out as dewatered cake.

5. List Standard Industrial Codes (SIC) in order of importance:

   a. **2869 – Resource Recovery and Manufacturer of Industrial Organic Chemicals**

6. Will waste be disposed of by any of the following methods:

   - Land Application
   - **Land Fill Disposal**
   - Outside Company
   - Other

If other, please explain:

_____

_____

Section C: Plant Information

1. Production Information:

   Number of employees: **Approximately 25**

   Number of shifts: **3-Shifts**

   Hours of operation:
   1st Start **6:00 AM** Stop **2:00 PM**
   2nd Start **2:00 PM** Stop **10:00 PM**
   3rd Start **10:00 PM** Stop **6:00 AM**

   Production days per week: **7**

   Number of wash downs/sanitation per shift: **N/A**

2. Does the process/operation have seasonal variations? Y / **N**

If yes, please explain:

_____

_____

_____

3. Are shut downs scheduled for maintenance or repairs? [Y] / N
If yes, is there a time frame in which such shut down will occur?
Will be annually during holidays when facility is in operation

4. How much influent water will be/is purchased on a monthly basis? **300,000 +/-** gallons

5. How much effluent water will be/is discharged to the sanitary sewer system?

Average Daily: **1.44 MGD** **Average Monthly:** **44 MG/month**

Maximum Daily: **3.024 MGD** **Maximum Monthly:** **94 MG/month**

6. Difference (Influent Flow – Effluent Flow): **N/A** gallons

Explain any significant differences in influent and effluent flow, excluding restroom and locker-room facilities; such as absorption into product, recirculation, loss to evaporation or regeneration:

Facility processes external wastewater sources, resulting in higher effluent flows vs. influent purchased water.

7. Is non-contact cooling water or RO system water contributed to the wastewater stream?
Y / [N]
_____ gallons

8. Is a private well on site? Y / [N]

9. Type of wastewater discharge:
- [**Continuous**]
- Batch
- Both

10. If marked continuous wastewater discharge, please mark all that apply/contribute to the wastewater flow and give an estimated amount of water contributed to each category that is marked *(if Batch, skip to question 11 below)*:

Type of Discharge	**Gallons per day**
Sanitary Wastewater*	**10,000 +/-**
Process Wastewater	**Ave: 1.44 MGD**
	Max: 3.024 MGD
Contaminated Cooling Water	
Uncontaminated Cooling Water	
Boiler/Kiln Wastewater	
Blow down/Cooling Tower Wastewater	

- Air Pollution Control Wastewater _____
- Other _____

If other, please explain:

_____

_____

_____

*Sanitary wastewater consists of domestic contributions; 25 gallons per person per day is an estimated base discharge.

10. If non-contact cooling water is discharged how much is reclaimed for reuse?

_____

If not reclaimed, please explain:

_____

_____

11. How is wastewater effluent flow measured?
    - Weir
    - Flume
    - **Magmeter**
    - Other

12. If batch discharged marked in question 9 above please mark the frequency of the batch process and the amounts of a normal batch operation:

Frequency	**Gallons per Batch**
Daily	_____
Weekly	_____
Monthly	_____
Yearly	_____

13. Do all floor drains discharge to the sanitary sewer? **Y / N**

Section D: Pretreatment

1. Are pretreatment processes implemented, **scheduled**, or being upgraded in your process? **Y / N**

2. Please check pretreatment processes that apply:
    - Aerobic lagoon
    - **Anaerobic digester/lagoon**
    - Biological treatment
    - **Centrifuge/Decanter**
    - Clarifier

- Chemical precipitation
- **DAF system**
- **Equalization tank**
- Facultative lagoon
- Gas/Oil separation
- Grease pit
- Ion exchange
- **pH adjustment/Neutralization**
- **Screen/Grit removal**
- Sedimentation
- Silver Recovery

If facility has grit removal, a grease pit, oil/water separation, or a DAF please describe where waste materials from such separations will be disposed of and by whom they will be transported:

Type of waste	Disposal site	Hauler
DAF	**Waste treated onsite**	**N/A**

3. Have all pretreatment process technicians been appropriately trained? **Y / [N]**
   The process technicians will be trained before the facility is in operation.
4. Will there be multiple effluent discharge outfalls? **Y / [N]**
5. Will all discharges have a collective discharge point before entering sanitary? **[Y] / N**

If yes, please explain where and what type:

The effluent wastewater from the facility is collected in a wet well. Wastewater from the wet well is pumped to the City of South Sioux City forcemain. The facility has complete control of when wastewater is discharged to the sanitary sewer.

6. Are any process changes planned that will affect the volume or loadings of the wastewater? *Mark all that apply*:
   - Pretreatment modifications
   - Process overhauls
   - Reduction/addition of sewer connections

   N/A – New Facility

If any of the above apply, please explain the changes and the impacts on wastewater flow from facility:

Projected Process Change	Projected Completion Date

All process changes shall be submitted in writing to the Environmental Services Department with a detailed description, prints/schematics, and a projected completion date for review and approval from the City before such changes commence.

7. Will other wastes, liquid or sludge, from the following list be hauled from the facility? ***NONE***

Type of Waste	**Amount per year** (Gallons)
• Paint/Paint Thinner	
• Inks/Dyes	
• Acids	
• Alkalis	
• Plating Waste	
• Pesticides	
• Rendering	

If any of the above are hauled from facility, please list by whom and where waste will be transported for disposal: ***N/A***

Type of Waste	**Disposal Site**	**Hauler**

Section E: Chemical Information

1. Provide a list of chemicals or raw materials used in processes that may affect the integrity of the wastewater being contributed to the sanitary collection system. Please attach an MSDS for all products used in processes in excess of 5 gallons.

Chemical/Material	**Quantity used per year**
Ferric Chloride	**TBD**
Caustic	**TBD**
Nitric Acid	**TBD**
Polymer	**TBD**

2. Does the facility keep all MSDS up to date for all chemicals at the facility? Y / [N]
   Not in operation yet
3. Is a Spill Prevention, Control and Countermeasure Plan (SPCC) in place; is it up to date?
   Not Required for Facility Y / [N]
4. Is an Accidental Discharge Plan in place; is it up to date? Y / [N]
   Accidental Slug and Spill Control Plan Submitted as a Work in Progress
5. Is a Slug Control Plan in place; is it up to date? Y / [N]
   Accidental Slug and Spill Control Plan Submitted as a Work in Progress
6. Is a Chemical Disposal Plan in place; is it up to date?
   Contingency Plan Submitted as a Work in Progress Y / [N]
7. If "no" to any of the above questions does the facility intend to implement such plans?
   The facility will do the following when it is in operation: [Y] / N
   - ***Keep all MSDS up to date***
   - ***Have a Contingency Plan in place when it is in operation.***
   - ***Have an Accidental Slug and Spill Control Plan in place when it is in operation.***
   - ***Have an Industrial Storm Water Pollution Prevention Plan in place when it is in operation.***
8. Are chemicals stored in secondary containment? Y / N
   As required by code
9. Can spilled materials, chemicals, or process wastes flow to floor drains and be discharged into the sanitary sewer? Y / [N]
10. In the past, has the facility had spills, discharges or slug load discharges? Y / [N]
    If yes, please explain:

Date	Type of spill/discharge	Amount	Reason

11. Does the facility have air-scrubbing equipment? Y / [N]
12. Does the facility use odor mitigating chemicals? Y / [N]

Section F: Discharge Data

If available or if possible please list the engineers estimated discharge concentration after any implemented or planned pretreatment processes for the following:

Pollutant	Projected Discharge Concentration
TSS	**TBD**
FOG	**TBD**
BOD	**TBD**
NH3	**TBD**
TKN	**TBD**
TN	**TBD**
TP	**TBD**
Chlorides	**TBD**
pH	**TBD**

Section G: Submission

Upon submission of this form please attach the following items from checklist:

- Schematic of operations/Facility plan
  - ***Attached Schematic of Operations***
- Detailed layout of wastewater flow and all discharge locations to the sanitary sewer
  - ***Attached mechanical drawings and Storm Water Pollution Prevention Plan includes site plan with forcemain to sanitary sewer detail***
- Sketch of all pretreatment facilities (*if applicable*)
  - ***Attached mechanical drawings***
- Copy of Spill Prevention, Control and Countermeasure Plan SOP
  - ***Not required for facility***
- Copy of Accidental Discharge SOP
  - ***Submitted as a work in progress Accidental Slug and Spill Control Plan***
- Copy of Slug Control SOP
  - ***Submitted as a work in progress Accidental Slug and Spill Control Plan***
- Copy of Chemical Disposal SOP
  - ***Submitted as a work in progress Contingency Plan***
- Copy of Stormwater Pollution Prevention Plan
  - ***Submitted as a work in progress Storm Water Pollution Prevention Plan***
- Latest wastewater analysis results *(if available)*
  - ***Not Available***
- Other Environmental Permits

Section H: Certification Statement

As the signing authority I am aware that there are penalties for providing any false or misleading information, including fines and/or imprisonment. To the best of my knowledge I believe the information provided here to be true, accurate and complete. By signing below I take responsibility for the information provided.

Name: [signature] Title: VP of Engineering Date: 6/5/15